

What is Claimed is:

1. A plastic water and beverage bottle adapted for preserving a liquid, comprising:

5 a liquid container comprising a plastic made container body having a liquid chamber for storing said liquid therein and an opening communicating with said liquid chamber, and a plastic made container cap detachably sealing at said opening of said container body to enclose said liquid chamber; and

a protective arrangement provided on said liquid container, comprising:

10 a nano titanium oxide for blocking ultra-violet light entering into said liquid chamber of said liquid container; and

15 a far infrared ray emitter mixed with said nano titanium oxide, wherein said far infrared ray emitter is adapted for emitting far infrared rays penetrating into said liquid chamber to depolarize negative ions of said liquid, in such a manner that said protective arrangement forms as a germ barrier for keeping said liquid in said liquid container in a germ-free manner.

2. A plastic water and beverage bottle, as recited in claim 1, wherein said far infrared ray emitter of said protective arrangement is a ceramic powder.

20 3. A plastic water and beverage bottle, as recited in claim 1, wherein said far infrared ray emitter and said nano titanium oxide constitutes 5% by weight of said protective arrangement and water constitutes 95% by weight of said protective arrangement.

25 4. A plastic water and beverage bottle, as recited in claim 2, wherein said far infrared ray emitter and said nano titanium oxide constitutes 5% by weight of said protective arrangement and water constitutes 95% by weight of said protective arrangement.

5. A plastic water and beverage bottle, as recited in claim 1, wherein said protective arrangement is formed as an anti-germ solution coated on exterior surfaces of said container body and said container cap.

6. A plastic water and beverage bottle, as recited in claim 4, wherein said protective arrangement is formed as an anti-germ solution coated on exterior surfaces of said container body and said container cap.

7. A plastic water and beverage bottle, as recited in claim 1, wherein said protective arrangement is integrally mixed with a plastic material to integrally form said container body and said container cap of said liquid container.

8. A plastic water and beverage bottle, as recited in claim 2, wherein said protective arrangement is integrally mixed with a plastic material to integrally form said container body and said container cap of said liquid container.

9. A plastic water and beverage bottle, as recited in claim 7, wherein said far infrared ray emitter is in 1:10,000 weight ratio with a plastic material of said liquid container and said nano titanium oxide is in 1:10,000 weight ratio with said plastic material of said liquid container.

10. A plastic water and beverage bottle, as recited in claim 8, wherein said far infrared ray emitter is in 1:10,000 weight ratio with a plastic material of said bottle and said nano titanium oxide is in 1:10,000 weight ratio with said plastic material of said liquid container.

11. A process of manufacturing a plastic water and beverage bottle which comprises the steps of:

(a) providing a liquid container comprising a plastic made container body having a liquid chamber for storing said liquid therein and an opening communicating with said liquid chamber, and a plastic made container cap detachably sealing at said opening of said container body to enclose said liquid chamber;

(b) mixing a predetermined amount of far infrared ray emitter with a nano titanium oxide to form an anti-germ solution, wherein said nano titanium oxide is for

blocking ultra-violet light entering into said liquid chamber of said liquid container, and said infrared ray emitter is adapted for emitting far infrared rays penetrating into said liquid chamber to depolarize negative ions of said liquid; and

(c) applying said anti-germ solution on said liquid container, wherein said
5 anti-germ solution forms as a germ barrier for keeping said liquid in said liquid container in a germ-free manner.

12. The process, as recited in claim 11, wherein said far infrared ray emitter of said protective arrangement is a ceramic powder.

13. The process, as recited in claim 11, wherein in said step (c), said anti-germ
10 solution is coated on exterior surfaces of said container body and said container cap.

14. The process, as recited in claim 12, wherein in said step (c), said anti-germ solution is coated on exterior surfaces of said container body and said container cap.

15. The process, as recited in claim 13, wherein said anti-germ solution is formed by constituting 5% by weight of said far infrared ray emitter and said nano
15 titanium oxide and 95% by weight of water.

16. The process, as recited in claim 14, wherein said anti-germ solution is formed by constituting 5% by weight of said far infrared ray emitter and said nano titanium oxide and 95% by weight of water.

17. The process, as recited in claim 11, wherein said anti-germ solution is
20 integrally mixed with a plastic material of said liquid container to integrally form said container body and said container cap of said liquid container.

18. The process, as recited in claim 12, wherein said anti-germ solution is integrally mixed with a plastic material of said liquid container to integrally form said container body and said container cap of said liquid container.

19. The process, as recited in claim 17, wherein said far infrared ray emitter is
25 in 1:10,000 weight ratio with said plastic material of said liquid container and said nano

titanium oxide is in 1:10,000 weight ratio with said plastic material of said liquid container.

20. The process, as recited in claim 18, wherein said far infrared ray emitter is in 1:10,000 weight ratio with said plastic material of said liquid container and said nano
5 titanium oxide is in 1:10,000 weight ratio with said plastic material of said liquid container.